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This document complies with the US OSHA Hazard Communication Standard (29 CFR 1910.1200), Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR), and Mexico's NMX-R-019-SC-2011.

1. Identification of the Substance/Preparation and the Company Undertaking

GHS Product Identifier

Product Form/Description:	Film Opaquer
Product Name:	IM-101, IM-102
Color:	Black

Other Means of Identification

Part Number:

Colors	Black	Black
Item#'s	01101	01102

Formula Code:

Colors	Black
→	
Formula Codes	XV-81714
→	

Recommended use of the chemical and restrictions on use

Recommended Use	Marking
Uses Advised Against:	No information available

Supplier's Details

Supplier Address	Arro-Mark Company LLC. 158 West Forest Ave Englewood, New Jersey, 07631 USA Phone: (201) 567-4112 Email: Sales@arromark.com
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Emergency Telephone Number

Chemtrec	US 800-424-9300	International 703-527-3887
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2. HAZARD IDENTIFICATION

Classification

This chemical is considered hazardous according to the OSHA Hazard Communications Standard 2012 (29 CFR 1910.1200):

Flammable Liquid Category	3
Reproductive Toxicity Category	1B
Skin Corrosion/Irritation Category	2
Serious eye damage/Eye Irritation Category	1
Specific target Organ Toxicity (single Exposure) respiratory tract irritation Category	3
Specific target Organ Toxicity (Single Exposure) Narcotic Effects Category	3



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GHS Label Elements, including precautionary statements



Signal Word: Danger

Appearance:	Black Liquid
Physical state:	Liquid
Odor:	Ethanollic odor

Hazard Statements:

Code	Statement
H226	Flammable liquid and vapor
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H360D	May damage the unborn child
H336	May cause drowsiness or dizziness

Precautionary Statements:

Prevention	Response	Storage	Disposal
<p>Do not handle until all safety precautions have been read and understood.</p> <p>Obtain special instructions before use. Keep container tightly closed Use only in a well ventilated area.</p> <p>Do not breathe dust/vapors/fumes</p> <p>Wash face and hands and any exposed skin thoroughly after handling.</p> <p>Wear protective gloves/clothing/eye protection/face protection.</p> <p>Keep away from heat/sparks/flame hot surfaces – no smoking.</p> <p>Use explosion proof electrical/ventilating/lighting equipment</p> <p>Ground/bond container and receiving equipment.</p> <p>Use non-sparking tools.</p> <p>Take precautionary measures against static discharge.</p>	<p>If exposed or concerned: get medical attention/advice.</p> <p>If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.</p> <p>If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.</p> <p>If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.</p> <p>If swallowed: Immediately call a poison center/doctor. Do not induce vomiting. In case of fire: Use CO2, dry chemical, foam or water spray to extinguish.</p>	<p>Store in a well-ventilated place. Keep cool.</p> <p>Store locked up.</p> <p>Keep container tightly closed.</p>	<p>Dispose of contents/container in approved waste disposal plant.</p>

General Advice

If exposed or concerned:	Get medical attention/advice
ACUTE HAZARD:	At high concentration, dizziness and unconsciousness may occur.
CAUTION:	Harmful or fatal if swallowed. Avoid inhalation. Direct contact may cause skin or eye irritation.

KEEP OUT OF REACH OF CHILDREN.



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Fire	Use CO2, dry chemical, foam, or water spray
Spills and Leaks	Contain and collect spillage
Hazard not Otherwise Classified (HNOC)	Not applicable

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous substance(s) or Complex Substance(s) required for disclosure

<u>Chemical Name</u>	<u>CAS -No</u>	<u>Weight %</u>	<u>Trade Secret</u>
1-Methoxy-2-propanol	107-98-2	45-50	
Diacetone Alcohol	123-42-2	20-25	
2-Methoxy-1-propanol	1589-47-5	<0.5	
N-methyl-2-pyrrolidone	872-50-4	1-5	

* The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of necessary first-aid measures

General Advice	In case of doubt, or when symptoms persist, seek medical attention.
Eye Contact	Immediately flush eyes with plenty of water for at least fifteen (15) minutes. Get medical attention immediately.
Skin Contact	Flush skin with plenty of water. Remove contaminated clothing. Wash skin thoroughly with soap and water or use a proprietary skin cleanser.
Inhalation:	Remove to fresh air, keep patient warm and at rest. If breathing is irregular seek medical advice. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention immediately.
Ingestion:	Seek medical attention immediately. Do not induce vomiting. Never give anything by mouth to an unconscious person.
Protection of First Aiders:	Use personal protection equipment.

Most important symptoms/effects, acute and delayed

Most important symptoms/effects	No information available
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Indication of immediate medical attention and special treatment needed, if necessary

Note to physician	Treat symptomatically
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical, carbon dioxide, and regular foam. For large fires, use foam or flood with fine water spray

Unsuitable Extinguishing media

No information available



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Specific Hazards arising from the chemical

Flash Point:	89°F
Flammability Limits (% by volume):	No Data
Unusual Fire Explosion Hazards:	No Data

Protective Equipment and Precautions for Firefighters

Wear appropriate self-contained breathing apparatus MSHA/NIOSH (approved or equivalent) and full protective gear. Cool closed containers exposed to fire with water spray. Avoid inhalation of material or combustion by-products; stay upwind.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions:	Avoid breathing vapors. Evacuate personnel to safe areas. Ensure adequate ventilation.
Environmental Precautions:	Avoid release into the environment. Do not allow entrance to drains or water-courses.

Methods and materials for containment and cleaning up

Methods for Containment:	Prevent further leakage or spillage if safe to do so.
Methods for Cleaning Up	Contain the spillage with non-combustible absorbent materials such as sand, earth, vermiculite, and diatomaceous earth. This will soak up the product. Place in a suitable container for disposal in accordance with the waste regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling	Avoid skin and eye contact. Avoid the inhalation of vapor and mist.
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Conditions for safe storage, including any incompatibilities

Storage	Keep away from open flame, hot surfaces and sources of ignition. Keep containers tightly closed. Observe label precautions. Store between 5-25° C in a dry, well ventilated place. Prevent unauthorized access.
Incompatible products	Unknown

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Exposure Guidelines:

<u>Chemical Name</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>NIOSH IDLH</u>
1-Methoxy-2-propanol	TWA 50 ppm STEL 100 ppm		ST 150 ppm 540 mg/m3 TWA 100 ppm 360 mg/m3
Diacetone Alcohol	TWA: 50 ppm	TWA: 50 ppm TWA: 240 mg/m	IDLH: 1800 ppm TWA: 50 ppm TWA: 240 mg/m3

Appropriate engineering controls

Engineering Measures	Showers, eyewash stations, ventilation systems
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Individual protection measures, such as personal protective equipment

Eye/Face protection	None under normal use conditions
Skin and body Protection	None under normal use conditions



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Respiratory Protection	None under normal use conditions. If irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn
Hygiene Measures	Use in a well-ventilated area. When using do not eat, drink, or smoke. Provide regular cleaning of equipment, work areas and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Property	Value	Remarks/Method
Physical State:	Liquid	None Known
Appearance and Odor:	Black; ethanolic odor	None Known
Odor Threshold:	No Data	None Known
Vapor Density (AIR = 1):	No Data	None Known
Vapor Pressure (mm-Hg @ 70°F):	No Data	None Known
Flash Point:	89°F	None Known
Specific Gravity (H2O=1) @70°F:	No Data	None Known
Flammability:	No Data	None Known
Auto-ignition Temperature:	No Data	None Known
Decomposition Temperature:	No Data	None Known
Melting Point:	No Data	None Known
Freezing Point:	No Data	None Known
Boiling Point:	No Data	None Known
Relative Evaporation Rate (Butyl Acetate = 1):	No Data	None Known
Solubility in Water:	No Data	None Known
Log Pow:	No Data	None Known
PH:	No Data	None Known
Viscosity (Kinematic):	No Data	None Known
Viscosity (Dynamic):	No Data	None Known
Explosive limits	No Data	None Known
Explosive Properties	No Data	None Known
Oxidizing Properties	No Data	None Known
Volatile Organic Compound:	77.4%, 741.96 g/L	None Known

10. STABILITY AND REACTIVITY

Reactivity	No data available
Chemical Stability	Stable under normal storage and handling conditions
Possibility of Hazardous reactions	None under normal use
Hazardous Polymerization	Will not occur
Conditions to Avoid	Heat, open flame, sparks, and sources of ignition
Incompatible Materials	Strong oxidizing and reducing agents, strong alkalis and strong acids
Hazardous Decomposition products	Carbon dioxide, carbon monoxide, smoke, soot and various oxidation by-products.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	May cause irritation of respiratory tract. May cause drowsiness and dizziness.
Eye Contact	Irritating to eyes. Causes serious eye irritation.
Skin Contact	Irritating to skin. Causes skin irritation.
Ingestion	Ingestion may cause nausea and vomiting.

Chemical	LD50 oral	LD50 Dermal	LD50 Inhalation
Diacetone Alcohol	LD50 > 4 g/kg (Rat)	LD50 = 13500 mg/kg (Rabbit) LD50 = 13630 mg/kg (Rabbit)	LC50 > 7.23 g/m3 (Rat) 8 h
N-methyl-2-pyrrolidone	LD50 Oral - Rat 4,150 mg/kg	LD50 Dermal - Rat - 5,000 mg/kg	
1-Methoxy-2-Propanol	LD50 Oral - Rat - 4,016 mg/kg	LD50 Dermal - Rat - 2,000 mg/kg	



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Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	No information available.
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Delayed and immediate effects and also chronic effects from short and long term exposure

Respiratory or Skin Sensitization	No information available.
Germ Cell Mutagenicity	No information available.
Carcinogenicity	This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

Chemical Name	ACGIH*	IARC**	NTP***	OSHA****
1-Methoxy-2-propanol	None Listed	None Listed	None Listed	None Listed
Diacetone Alcohol	None Listed	None Listed	None Listed	None Listed
N-methyl-2-pyrrolidone	None Listed	None Listed	None Listed	None Listed

- * ACGIH: (American Conference of Governmental Industrial Hygienists)
- ** IARC: (International Agency for Research on Cancer)
- *** NTP: (National Toxicology Program)
- ****OSHA: (Occupational Safety & Health Administration)

If X is present in OSHA column:

Reproductive Toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Chronic Toxicity	Avoid repeated exposure.
Target Organ Effects	Liver. Kidney. Respiratory system. Eyes. Skin. Central nervous system (CNS). Blood. Lungs. Lymphatic system.
Aspiration Hazard	No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity	There is no data available on the product itself
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13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods	Dispose of in accordance with all applicable local, state and federal regulations.
Contaminated Packaging	Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT (Ground)

UN-Number	UN1210
Proper Shipping Name	Printing Ink
Hazard Class	3
Packing Group	III
Description	UN1210, Printing Ink, 3, PG III, Limited Quantity
Emergency Response Number	129

TDG (Ground)

UN-Number	UN1210
Proper Shipping Name	Printing Ink
Hazard Class	3
Packing Group	III
Description	UN1210, Printing Ink, 3, PG III, Limited Quantity

MEX (Ground)

UN-Number	UN1210
Proper Shipping Name	Printing Ink
Hazard Class	3
Packing Group	III



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Description UN1210, Printing Ink, 3, PG III, Limited Quantity

IMDG/IMO (Sea)

UN-Number UN1210
 Proper Shipping Name Printing Ink
 Hazard Class 3
 Packing Group III
 EmS No. F-E, S-D
 Description UN1210, Printing Ink, Class 3, PG III (31.67°C c.c.), Limited Quantity

IATA (Air)

UN-Number UN1210
 Proper Shipping Name Printing Ink
 Hazard Class 3
 Packing Group III
 ERG Code 3L
 Description UN1210, Printing Ink, 3, PG III, Limited Quantity

15. REGULATORY INFORMATION

TSCA INVENTORY:	The product on this SDS is not listed on the Toxic Substances Control Act Inventory. All ingredients used to manufacture this product are listed on the TSCA Inventory.
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US Regulatory Rules:

Section 313 or Title III of SARA. This product contains a chemical, which is subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations Part 372.

None Listed

Hazard categories

Acute Health Hazard	YES
Chronic Health Hazard	YES
Fire Hazard	YES
Sudden release of Pressure Hazard	NO
Reactive Hazard	NO

State Regulation

California Proposition 65	N-Methyl-2-pyrrolidone
Massachusetts Right to know List	None Listed
New Jersey Right to Know	N-Methyl-2-pyrrolidone, Diacetone Alcohol, N-methyl-2-pyrrolidone
Pennsylvania Right to Know	N-Methyl-2-pyrrolidone, Diacetone Alcohol, N-methyl-2-pyrrolidone



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16. OTHER INFORMATION

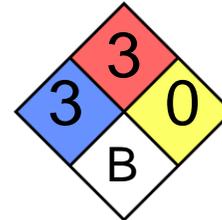
HMIS CLASSIFICATION

Health Hazard:	2
Flammability:	3
Physical Hazard:	0
PPE	B Splash Goggles, Gloves

Health Hazard:	3
Flamability:	3
Physical Hazard:	0
Personal Protection:	B

NFPA CLASSIFICATION

Health Hazard	3
Flammability	3
Reactivity	0
Personal Protection	B



The information accumulated is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made become available subsequently to the date hereof, we do not assume any responsibility for the results of its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Arro-Mark Company, LLC Compliance Department

End of Safety Data Sheet